

## REFERENCES

### Energy recovery from waste water

#### Customer

ABZ Allgemeine Baugenossenschaft Zürich CH

#### Project

Ruggächer, Zürich-Affoltern CH  
280 apartments, 14 buildings

#### Cost

Heating plant: heat exchanger + heat pump  
EUR 363'000

#### History

Installation Summer 2005  
Operation 2007

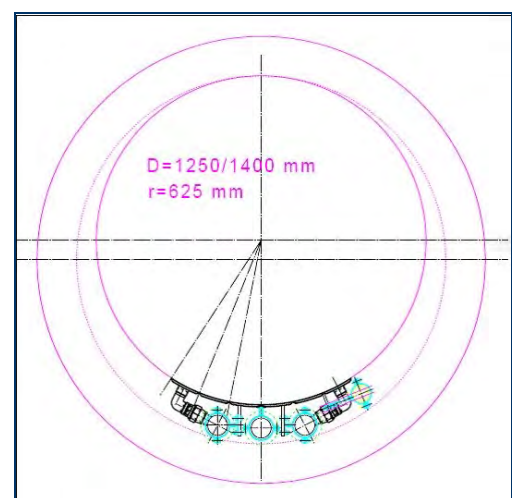


## PROJECT / CONSTRUCTION / SPECIALITY

- |                                    |            |   |
|------------------------------------|------------|---|
| - Waste water flow                 | Ca. 43 l/s | The distributing pipes to the different buildings are designed with a temperature difference of 35 K for low flow because of low height in the garage.<br>In summer the heat pump goes to 65°C (149 F) for domestic hotwater.<br>During the heating season, the heat pump runs with 45/35°C. (113/95 F) |
| - Length of heat exchanger         | 54 m       |   |
| - Heat extraction from waste water | 252 kW     |   |
| - Heat pump performance            | 322 kW     |   |

## PROJECT / CONSTRUCTION / SPECIALITY

- |   |                                       |  |
|---|---------------------------------------|--|
| - Replacement of the existing sewer with a new sewer with integrated heat exchanger | - Installation of 54 m sewer in 1 day | - CO <sub>2</sub> -reduction 390 t / a |
|---|---------------------------------------|--|



## OUR ENGINEERING SERVICES

- |                                 |               |                   |
|---------------------------------|---------------|-------------------|
| - Feasibility studies (project) | - Project     | - Operation       |
| - Potential studies (city)      | - Tender      | - Quality control |
| - Project analysis              | - Contracting |                   |